

SM3H unit 6 test review answers

1. $\frac{4\pi}{15}$
2. $-\frac{7\pi}{10}$
3. $\frac{41\pi}{300}$
4. 390°
5. -450°
6. 137.5°
7. 45.375 cm
8. 10.24 in
9. 161.61 square feet
10. 6.4 square meters
11. $455^\circ, -265^\circ$
12. $115^\circ, -605^\circ$
13. $\frac{7\pi}{6}, -\frac{17\pi}{6}$
14. $\frac{23\pi}{4}, \frac{7\pi}{4}, -\frac{\pi}{4}$
15. 3016 feet per minute
16. $\sin \alpha = \frac{5\sqrt{74}}{74}$ $\cos \alpha = -\frac{7\sqrt{74}}{74}$
 $\tan \alpha = -\frac{5}{7}$ $\sec \alpha = -\frac{\sqrt{74}}{7}$
 $\csc \alpha = \frac{\sqrt{74}}{5}$ $\cot \alpha = -\frac{7}{5}$
17. $\sin \alpha = -\frac{3\sqrt{13}}{13}$ $\cos \alpha = \frac{2\sqrt{13}}{13}$
 $\tan \alpha = -\frac{3}{2}$ $\sec \alpha = \frac{\sqrt{13}}{2}$
 $\csc \alpha = -\frac{\sqrt{13}}{3}$ $\cot \alpha = -\frac{2}{3}$
18. 82.8°
19. 35.3°
20. 17.5°
21. $\theta \approx 21.7^\circ$
22. $\theta \approx 15.2^\circ$
23. $\theta \approx 29.8^\circ$
24. $b \approx 15.2$, $\angle A \approx 40.5^\circ$, $\angle B \approx 49.5^\circ$
25. $a \approx 6.6$, $b \approx 13.5$, $\angle A \approx 64^\circ$
26. ≈ 5.6
27. $\approx 38.0^\circ$
28. ≈ 175 feet
29. $\alpha = 345.9^\circ, 194.1^\circ$
30. $\alpha = 99.1^\circ, 260.9^\circ$
31. $\alpha = 293.4^\circ, 113.4^\circ$
32. 0
33. 0
34. $\sqrt{3}$
35. $\sqrt{2}$
36. $\frac{2\sqrt{3}}{3}$

37. 0
38. $-\frac{\sqrt{3}}{2}$
39. $-\frac{1}{2}$
40. 1
41. $-\frac{2\sqrt{3}}{3}$
42. -2
43. $-\sqrt{3}$
44. 45°
45. 0°
46. 0°
47. 60°
48. 30°
49. 90°
50. 45°
51. $30^\circ, \frac{\pi}{6}$
52. $60^\circ, \frac{\pi}{3}$
53. $45^\circ, \frac{\pi}{4}$
54. $90^\circ, \frac{\pi}{2}$
55. $-\frac{5}{4}$
56. $-\frac{24}{7}$
57. $-\frac{\pi}{6}$
58. $-\frac{\pi}{4}$
59. $\frac{\pi}{4}$
60. $\frac{\sqrt{3}}{2}$
61. 1
62. $-\frac{\pi}{4}$
63. $\frac{\pi}{4}$
64. $\frac{\pi}{6}$
65. $\frac{\pi}{6}$
66. 90°
67. 135°
68. 30°
69. 90°
70. $x = \pi$
71. $x = 210^\circ, 330^\circ$
72. $x = \frac{\pi}{6} + 2\pi k$, $x = \frac{5\pi}{6} + 2\pi k$
73. $x = \frac{3\pi}{4} + \pi k$
74. $x = 45^\circ + 360^\circ k$, $x = 315^\circ + 360^\circ k$
75. $x = 30^\circ + 360^\circ k$